MDOT EXCELLERATOR

Performance Management System

State Highway Administration
Quarterly Report
January 2017

Maryland Department of Transportation

State of Maryland

A Message From the Governor

"Our administration is committed to developing innovative solutions that deliver what Marylanders want – an affordable and reliable transportation system. By implementing a comprehensive program of accountability and continual improvements, we will deliver a better transportation system for the citizens of Maryland."

"This is another step our administration is taking to Change Maryland for the Better!"

– **Larry Hogan**, *Governor*

CHANGING
Maryland
for the Better

The Maryland Department of Transportation and its
Transportation Business Units proudly present the official mission statement.

Maryland Department of Transportation

"The Maryland Department of Transportation is a customer-driven leader that delivers safe, sustainable, intelligent, and exceptional transportation solutions in order to connect our customers to life's opportunities."

A Message From the Secretary

My Fellow Marylanders,

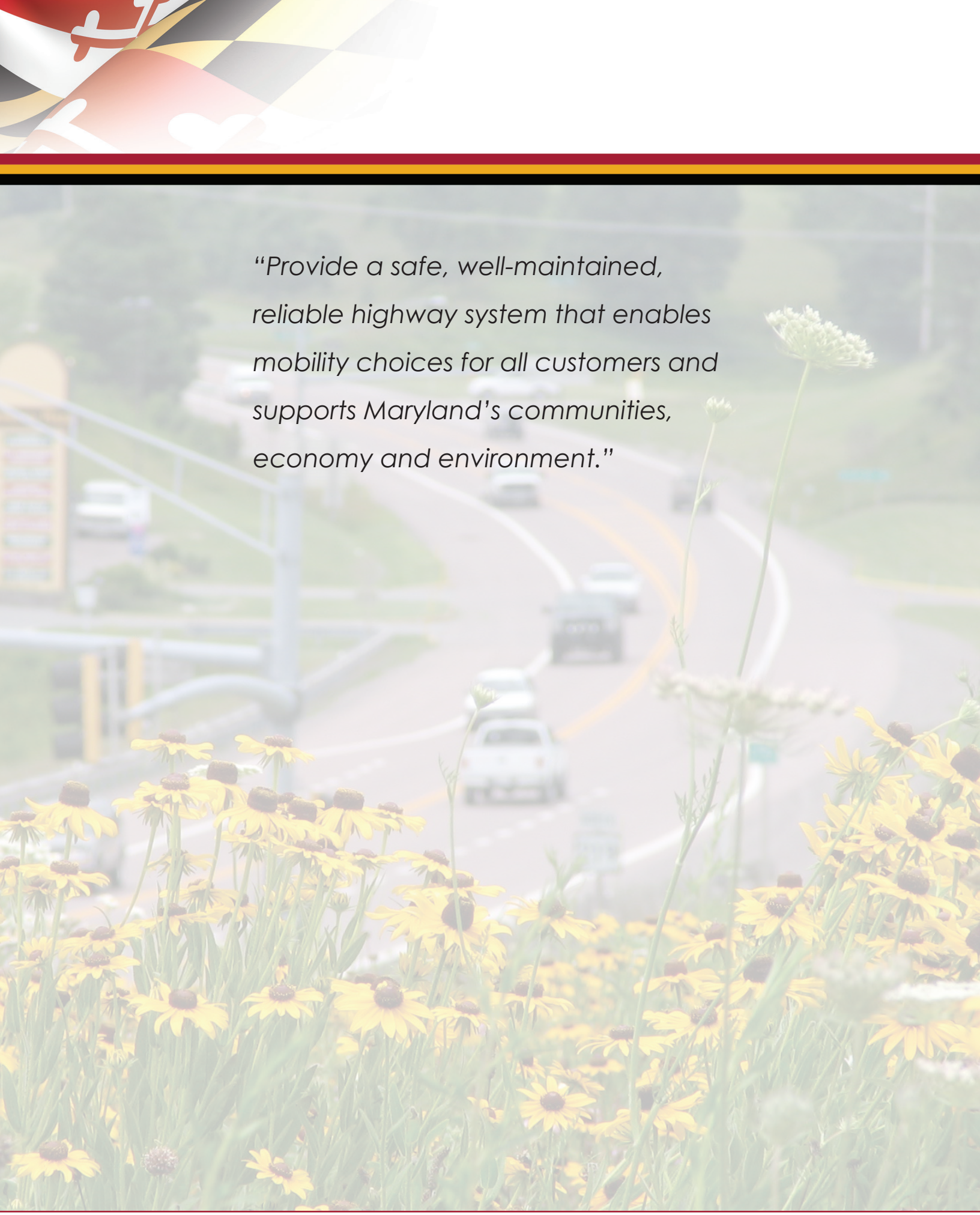
Pete K. Rahn
Secretary

I am pleased to present the Maryland Department of Transportation Excellerator Performance Management System. I have been a longtime proponent of performance measures as a critical ingredient which drives organizations to exceptional standards to meet the transportation demands of our customers. At the Maryland Department of Transportation, we have embarked on a dedicated journey of creating performance measures that are important to all who live in and travel throughout the State of Maryland.

The Maryland Department of Transportation, and its transportation business units, created a single focused Mission Statement, which is the guiding light for all of our transportation products and services. We are wholeheartedly committed to being driven by the needs of our customers and to exceed their expectations. Whether our customers fly out of the Baltimore/Washington International Thurgood Marshall Airport, take a cruise out of the Port of Baltimore, ride one of our buses or rail lines, register their vehicles, or travel our highways and bridges, we all stand together as the Maryland Department of Transportation.

Our Excellerator program is comprised of ten tangible results. Those results are critical components for the organization and will drive our daily business decisions. How we achieve those results will be an organization-wide process of developing measures and strategies to achieve the optimum level of performance. The public we serve is able to see the results of our performance every quarter. This program is a living, evolving performance process that is in a constant state of evaluation, analysis and action. Some quarters may be better than others, but with the appropriate measures in place, we will have a constant finger on the pulse of the products and services we deliver to the citizens of Maryland. Whether we are being a good neighbor or facilitating economic opportunities within our State, we, the Maryland Department of Transportation, are working together every day to improve our performance and strive to reach exceptional customer service.

We thank you for this opportunity to share our initiative and are excited to embark upon a program of constant progress towards outstanding results.



"Provide a safe, well-maintained, reliable highway system that enables mobility choices for all customers and supports Maryland's communities, economy and environment."

A Message From the Administrator

Dear Valued Customer,

The Maryland Department of Transportation's State Highway Administration (SHA) is the backbone of Maryland's transportation system - connecting our citizens to opportunities, employment and recreation and supporting businesses that are so vital to our economy. All of us, whether we use transit, walk, bicycle or drive, rely on highways for our food and goods to arrive by truck to our communities. We use highways to access the airport, and transit centers, and the Port of Baltimore. Most of us do not think twice about the highway system until there is a problem. At SHA, we think about roads every day and work hard to keep you mobile and safe as you travel. The Excellerator establishes performance measures to keep us on track, to prevent issues from becoming problems and to continually improve our efforts for the citizens we serve.

The highways we manage reach every corner of the State and our employees are a part of the communities we serve. SHA takes pride in delivering the best possible services we can, placing your safety as our top priority. Customer service, great customer service is why we are here – to provide you with a smooth ride to get you where you want to go. Our commitment to you will be even more evident as we move forward with the MDOT Excellerator measures, providing a transparent and easily accessible way for us to share progress. We look forward to sharing this journey with our customers as we remain, *Customer Driven, Now More Than Ever.*

Gregory C. Johnson, P.E.
SHA Administrator

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Performance Measures Index

Tangible Results

		Frequency	Driver
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Tangible Result # 8: Be a Good Neighbor			**Simon Taylor, MAA**
SHA 8.1	Percent of Half-mile Segments of Roadway with Acceptable Litter Levels	Annually (Jan.)	Russ Yurek/Sandi Sauter, SHA
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SHA 9.1	Percent of Impervious Restoration Completed Annually	Annually (Oct.)	Sonal Ram, SHA
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TANGIBLE RESULT #1

Provide Exceptional Customer Service

Every MDOT employee is responsible for delivering exceptional customer service by providing our customers with respectful, timely and knowledgeable responses to all inquiries and interactions.

RESULT DRIVER:

Leslie Dews

Motor Vehicle Administration (MVA)

Provide Exceptional Customer Service

TBU COORDINATOR:
Greg Slater
State Highway Administration (SHA)

PERFORMANCE MEASURE DRIVER:
Joseph Sagal
State Highway Administration (SHA)

PURPOSE OF MEASURE:
To enhance customer service with DMS messaging to better inform the traveling public with timely information.

FREQUENCY:
Annually (in January)

DATA COLLECTION METHODOLOGY:
Analysis of Data from the CHART Advanced Transportation Management System.

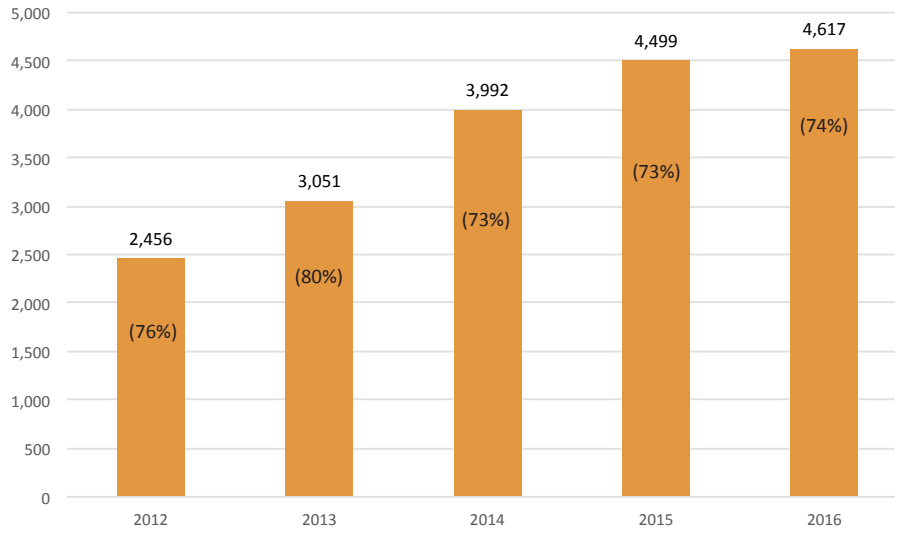
NATIONAL BENCHMARK:
N/A

PERFORMANCE MEASURE SHA 1.1

Percentof Dynamic Message Sign (DMS) Travel Alerts Communicated in a Timely Manner

Communicating real time information to the traveling public is important to ensure customers have the information they need in a timely manner to make wise decisions while traveling on Maryland roadways. Dynamic message signs provide information about changing highway conditions to improve operations, reduce accidents, and inform travelers. This is a new measure for SHA, now under development with the University of Maryland.

Average Maintenance Activity Expenditures Per Lane-Mile



TANGIBLE RESULT #2

Use Resources Wisely

MDOT receives resources from our customers and they expect products and services in return. To better serve our customers, MDOT must maximize the value of every dollar we spend.

RESULT DRIVER:

Corey Stottlemyer

The Secretary's Office (TSO)

TBU COORDINATOR:
Greg Slater
State Highway Administration (SHA)

PERFORMANCE MEASURE DRIVER:
Russ Yurek/Sandi Sauter
State Highway Administration (SHA)

PURPOSE OF MEASURE:
To determine how well SHA uses available funding to sustain or improve the level of service on maintenance activities as an indicator of how efficiently roadway facilities are maintained.

FREQUENCY:
Annually (in January)

DATA COLLECTION METHODOLOGY:
Maintenance activity expenditures per lane mile of roadway is maintained through the Financial Management Information System (FMIS).

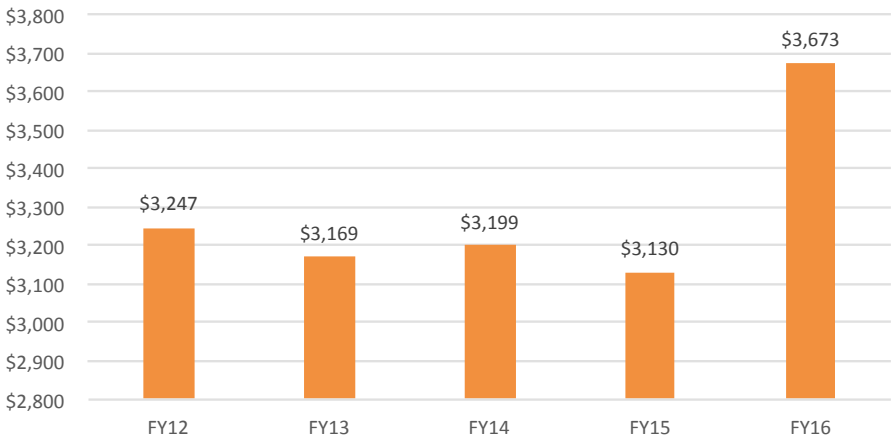
NATIONAL BENCHMARK:
N/A

PERFORMANCE MEASURE SHA 2.1

Average Maintenance Activity Expenditures Per Lane Mile

Maximizing the use of resources for maintenance activities enables SHA to fund other projects and programs, providing more goods and services to the traveling public. Maintenance activities include the following: sign maintenance, pavement markings, line striping, guardrail maintenance, lighting, brush and tree trimming, mowing, ditching, litter removal, culverts and inlets maintained, roadside grading, debris removal underdrain, other roadside and drainage activities,curb and gutter, delineators, erosion control, and slope maintenance. The statewide trend shows a modest unit cost increase consistent with increased costs in labor, material and contract resources.

Average Maintenance Activity Expenditures Per Lane-Mile



TBU COORDINATOR:
Greg Slater
State Highway Administration (SHA)

PERFORMANCE MEASURE DRIVER:
Sejal Barot
State Highway Administration (SHA)

PURPOSE OF MEASURE:
To quantify the overall pavement condition.

FREQUENCY:
Annually (in July)

DATA COLLECTION METHODOLOGY:
Overall RSL of each pavement section is the lowest of the individual RSLs for ride quality, cracking, rutting, and friction and is reflected in years remaining. Individual pavement section RSLs are rolled into a network-wide average. The performance trend of the pavement is controlled in this situation by cracking data, which has the least mature and most technically difficult collection and processing technology, which leads to a higher variance of statistical error. SHA collects this data using road scanning technology that captures pavement condition information.

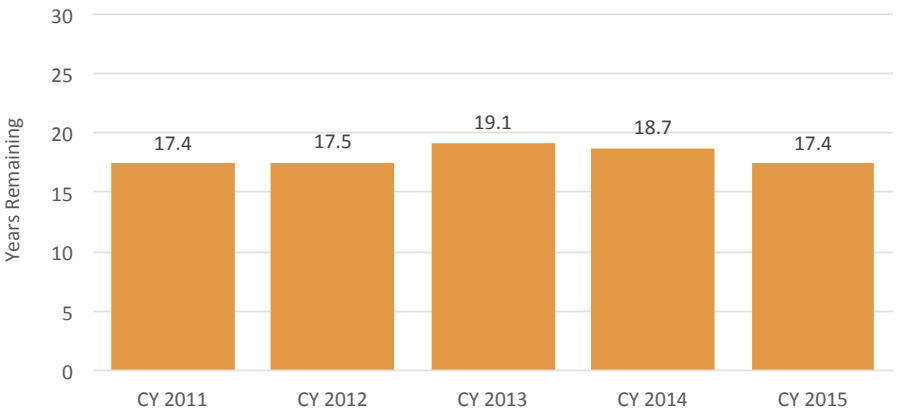
NATIONAL BENCHMARK:
N/A

PERFORMANCE MEASURE SHA 2.2

Overall Remaining Service Life (RSL) of the SHA Pavement Network

The overall pavement condition, in terms of Remaining Service Life (RSL), is a measure that helps SHA understand when there is a need to repave the roadway. Repaving is important for safety and the ride quality customers experience, but using RSL also helps identify the optimal time to invest in repaving before a repaving project may become a more significant overhaul of the roadway. To be efficient in maintenance and state of good repair work of the roadways system, SHA engages in strategic planning of the roadway resurfacing system preservation fund annually to inform SHA Districts on where to make repairs and what type of repairs that maximize the return on investment. This work relies on a stable System Preservation funding stream. Continuous improvement of strategic planning and implementation is ongoing, and innovative treatments are being implemented to target asphalt cracking deterioration and low friction.

Overall Remaining Service Life (RSL) of the SHA Pavement Network



TBU COORDINATOR:
Greg Slater
State Highway Administration (SHA)

PERFORMANCE MEASURE DRIVER:
Jean Repkorwich
State Highway Administration (SHA)

PURPOSE OF MEASURE:
To track the efficiency of spending in SHA's operating program.

FREQUENCY:
Annually (in July)

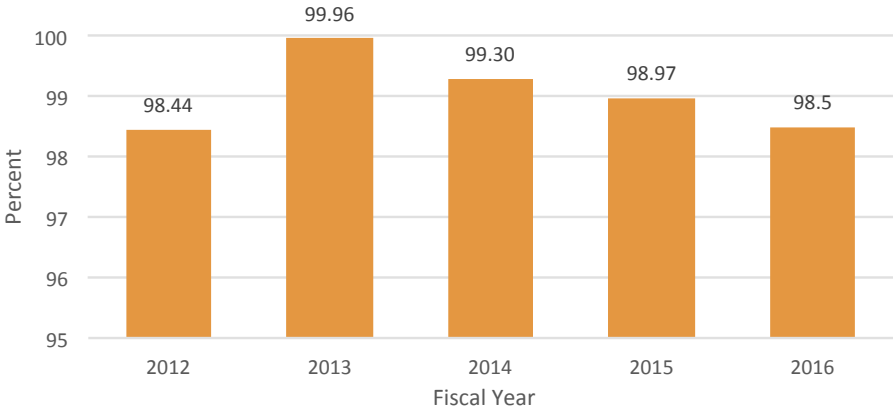
DATA COLLECTION METHODOLOGY:
Track operating program spending versus the total budget for SHA's operating programs.

NATIONAL BENCHMARK:
N/A

PERFORMANCE MEASURE SHA 2.3
Percent of Operating Dollars Spent to Budget

SHA monitors the efficiency of spending in SHA's operating programs. This is important to customers so that they can see how well public funds are being used in the operation of the transportation system. Data is from the State System Maintenance Program and the Highway Safety Operating Program. SHA has achieved an acceptable level (at or below 1% of the annual amended appropriation) of performance for each of the fiscal years shown. Currently, there are no interventions, strategic action plans, or improvements necessary to this process; however, SHA routinely evaluates process and areas for efficiency improvements. SHA monitors operating program spending very closely every month throughout the fiscal year. Issues are immediately identified and addressed.

Percent of Operating Dollars Spent to Budget



TANGIBLE RESULT #3

Provide a Safe and Secure Transportation Infrastructure

MDOT will not compromise on our commitment to continually improve the safety and security of our customers and partners in everything we do.

RESULT DRIVER:

Sarah Clifford

Maryland Transportation Authority (MDTA)

Provide a Safe and Secure Transportation Infrastructure

TBU COORDINATOR:
Greg Slater
State Highway Administration (SHA)

PERFORMANCE MEASURE DRIVER:
Cedric Ward
State Highway Administration (SHA)

PURPOSE OF MEASURE:
To reduce fatalities in work zones.

FREQUENCY:
Annually (in July)

DATA COLLECTION METHODOLOGY:
Based on law enforcement reported crashes in designated work zones (and maintenance areas).

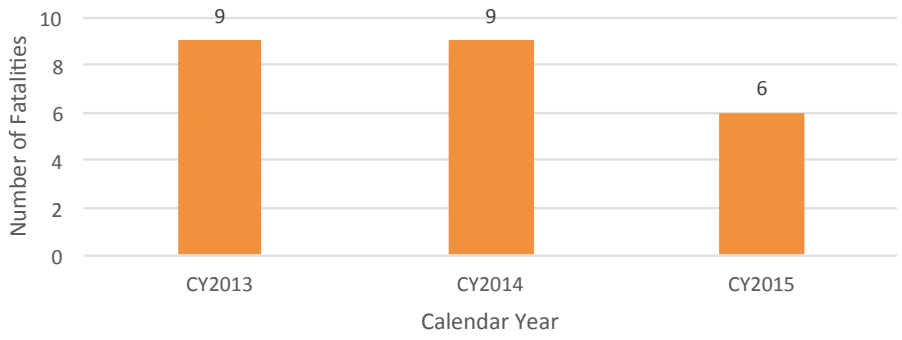
NATIONAL BENCHMARK:
"Toward Zero Deaths"

PERFORMANCE MEASURE SHA 3.1

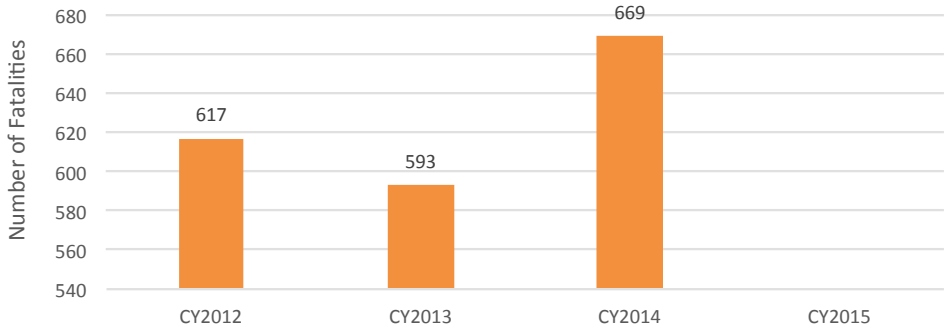
Annual Number of Temporary Traffic Control (TTC) Fatalities on All Maryland Roads

Nationally, more than 700 people die in work zones every year. Four of the five people killed in work zones are motorists, not highway workers. The majority of work zone crashes occur during daylight hours. On average, most work zone crashes occurred in Anne Arundel, Baltimore, Montgomery and Prince George's counties, and Baltimore City. In 2014, nine people lost their lives in Maryland work zone crashes, including four highway workers. Major contributing factors include: not paying attention, going too fast for conditions, failure to yield the right-of-way, and following too closely. In calendar year 2015, there were only six fatalities on Maryland's highways, a decrease from nine fatalities each in the two prior calendar years.

Annual Number of Temporary Traffic Control Zone Traffic Fatalities on all Maryland Roads



Annual Number of Temporary Traffic Control Zone Traffic Fatalities on all National Roads



TBU COORDINATOR:
Greg Slater
State Highway Administration (SHA)

PERFORMANCE MEASURE DRIVER:
Russ Yurek/Sandi Sauter
State Highway Administration (SHA)

PURPOSE OF MEASURE:
To determine percent of roadway lighting functioning because it is an important indication of safety and security along the roadways.

FREQUENCY:
Annually (in January)

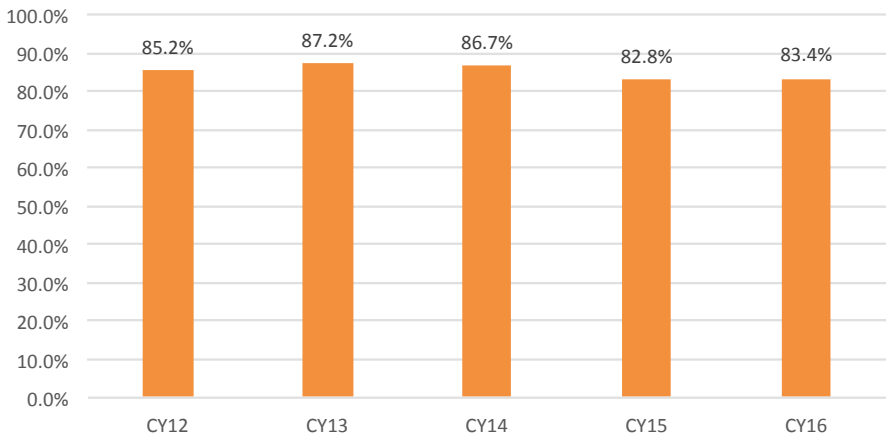
DATA COLLECTION METHODOLOGY:
Monthly assessment of lights to determine lit/unlit status through field observations (i.e., visual, windshield inspections).

NATIONAL BENCHMARK:
N/A

PERFORMANCE MEASURE SHA 3.2
Percent of SHA Roadway Lighting Functioning

Roadway lighting provides safety and security along the roadways. SHA strives to maintain a level of service (LOS) of 85 percent. The statewide LOS for CY 2016 was 83.4 percent. The five-year average is 85.1 percent. SHA is evaluating the highway lighting needs and has removed some unneeded lighting. SHA is continuing to remove the unneeded lighting and continues to implement the transition to the use of LED lights. SHA is re-evaluating the monthly assessment and reporting to determine what is included and the value of the assessment. SHA increased contract authority by 20 percent for all maintenance contracts, including lighting, to work towards meeting the desired LOS.

Percent of SHA Roadway Lighting Functioning



TBU COORDINATOR:
Greg Slater
State Highway Administration (SHA)

PERFORMANCE MEASURE DRIVER:
Russ Yurek/Sandi Sauter
State Highway Administration (SHA)

PURPOSE OF MEASURE:
To determine percent of roadside with guardrail in acceptable condition.

FREQUENCY:
Annually (in January)

DATA COLLECTION METHODOLOGY:
The Maryland Condition Assessment Reporting System (MCARS) team compares actual maintenance condition against desired maintenance condition on a meets/does not meet basis. The MCARS team assesses the side of the road assets every year by examining each half-mile segment of a sample of SHA half-mile segments of roadway. This examination includes a visual assessment of any maintenance assets in the area.

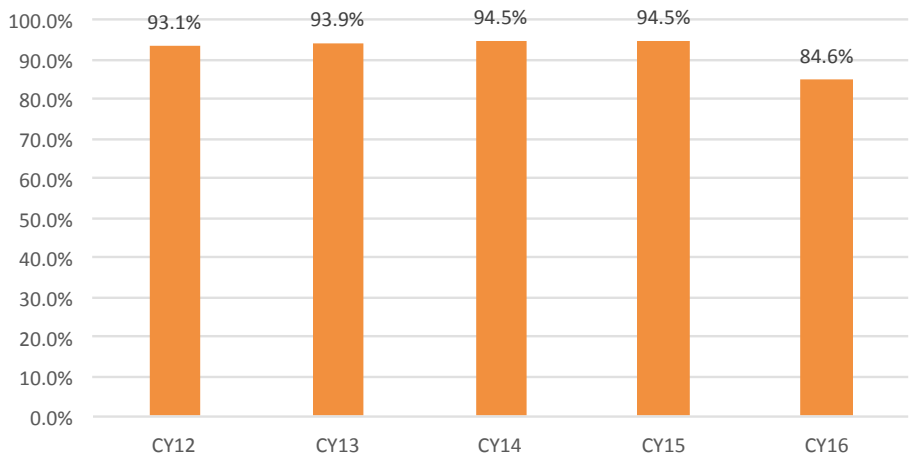
NATIONAL BENCHMARK:
N/A

PERFORMANCE MEASURE SHA 3.3

Percent of Half-Mile Segments of Roadway with Guardrail in Acceptable Condition

Guardrails are a critical safety component on the roadway and, to maximize safety, must be in acceptable condition. SHA's desired level of service (LOS) is 90 percent of SHA guardrail acceptable at the time of assessment. The statewide LOS for CY 2016 was 84.6 percent. The five-year average is 92.1 percent. SHA reviews to determine if in any half-mile segment of a sample of SHA half-mile segments of roadway, that 95 percent of all traffic barrier is functioning as intended. Functioning as intended is defined as all segments are standard height (27 +/- 3"), there are no missing or excessively loose posts, and minimal vehicle damage is present. SHA reviews guardrails continuously through physical inspections. SHA increased contract authority by 20 percent for all maintenance contracts, including guardrail, to work towards meeting the desired LOS.

Percent of Half-Mile Segments of Roadway with Guardrail in Acceptable Condition



TBU COORDINATOR:
Greg Slater
State Highway Administration (SHA)

PERFORMANCE MEASURE DRIVER:
John Thomas
State Highway Administration (SHA)

PURPOSE OF MEASURE:
To track annual trends related to illegal truck parking and determine where additional truck parking spaces would be feasible for design and construction within statewide facilities.

FREQUENCY:
Annually (in April)

DATA COLLECTION METHODOLOGY:
Annually identify locations where overnight truck parking occurs along the Maryland Statewide Truck Route System through the Maryland Freight Network Truck Parking Survey. Collect usage and overage information from observations and coordinate with MSP data on illegally parked trucks.

NATIONAL BENCHMARK:
National Priority

PERFORMANCE MEASURE SHA 3.4

Amount of Documented Illegal Truck Parking Along Maryland State Roadways

It is important to determine if sufficient and safe truck parking exists for Commercial Motor Vehicles (CMVs) to ensure that trucks park safely away from the roadway while getting their required rest. Past studies conducted by MDOT (2005) have determined that the number of legal parking spaces in Maryland for CMVs is insufficient. The Federal Highway Administration (FHWA) Jason's Law survey (2014) found that truck parking is a major challenge in every state, and Maryland's I-95 Corridor section was among the most problematic areas in the nation. The shortage of legal truck parking results in high volumes of illegally parked CMVs at truck stops, rest areas, truck weigh and inspection stations, ramps, shoulders and other locations that may be prohibited to truck parking and has been a cause of serious accidents on Maryland's highways. Additionally, lack of parking is a challenge for drivers who must maintain hours of service regulations but have no place to park near where they need to deliver. This presents safety, economic and congestion issues.

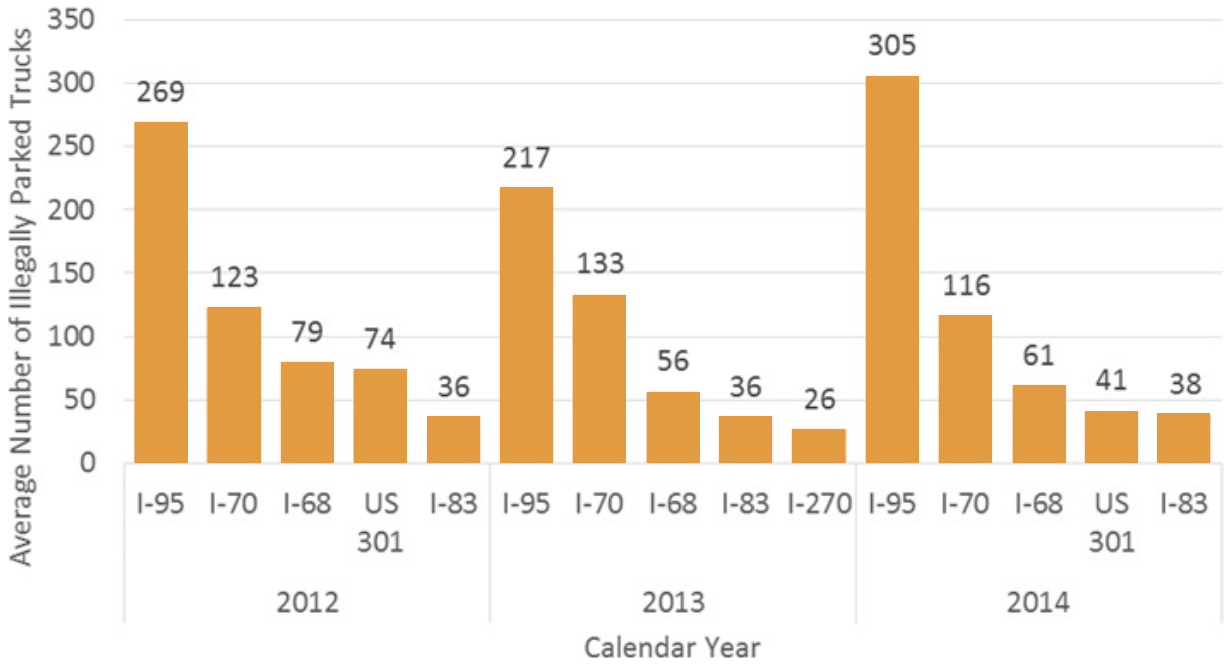
With the passage of The Moving Ahead for Progress in the 21st Century (MAP-21), Jason's Law was established by the U.S. Department of Transportations (DOT) FHWA to make the shortage of truck parking a national priority. Jason's Law specifies that the USDOT perform three main tasks as part of a survey and comparative assessment: 1) evaluate State capacity to provide adequate truck parking; 2) assess truck volumes in each State and 3) develop a system of metrics to measure parking in each State. FHWA collected truck parking information from each state in 2014, and FHWA requires states to submit truck parking information routinely under this law.

The Maryland Freight Strategic Plan was developed in 2012 to address the anticipated increase of truck traffic on the statewide freight roadway network. This plan included Annual Overnight Truck Parking counts, which have been conducted since 2012. Over the past three years, the annual Maryland Freight Network Truck Parking Survey was used to identify baseline conditions and track trends related to illegal truck parking on the Maryland Truck Route system. The top five high volume locations have consistently included I-95, I-70 and I-68 along with US 301, I-83 and I-270 varying within the list over the last 3 years. The 2015 parking analysis is underway and provides usage information to determine the statewide parking availability including public and private facility truck parking spaces.

PERFORMANCE MEASURE SHA 3.4

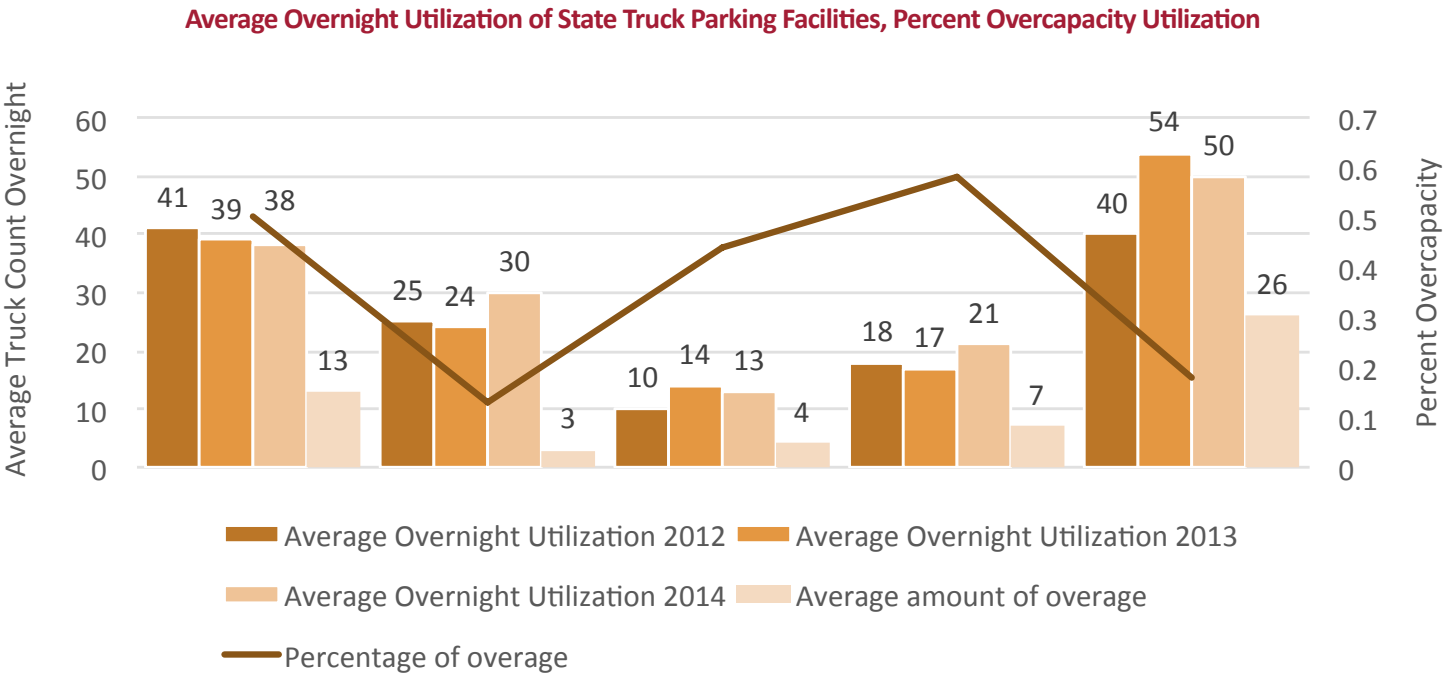
Amount of Documented Illegal Truck Parking along Maryland State Roadways

Amount of Documented Illegal Truck Parking Along Maryland State Roadways



PERFORMANCE MEASURE SHA 3.4

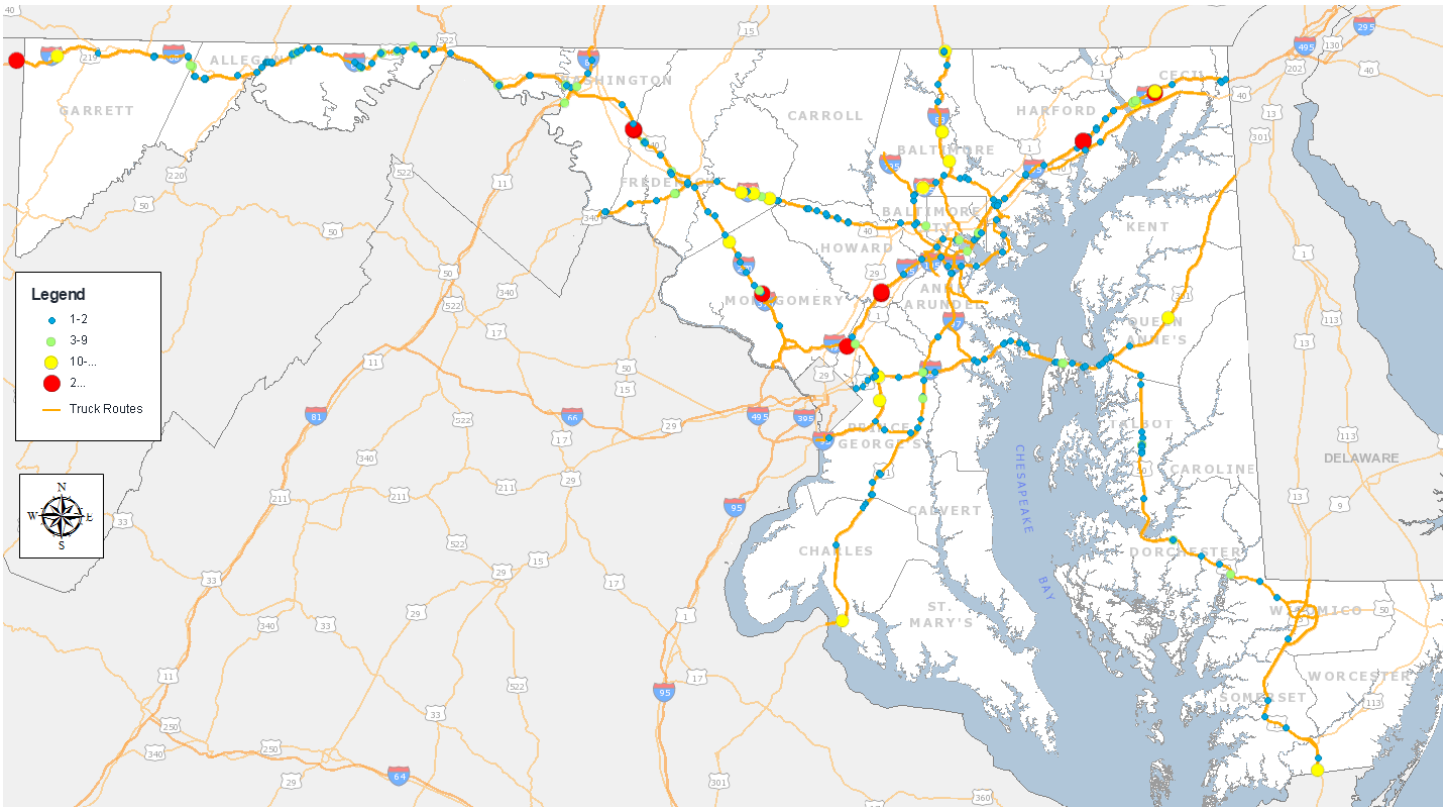
Amount of Documented Illegal Truck Parking along Maryland State Roadways



PERFORMANCE MEASURE SHA 3.4

Amount of Documented Illegal Truck Parking along Maryland State Roadways

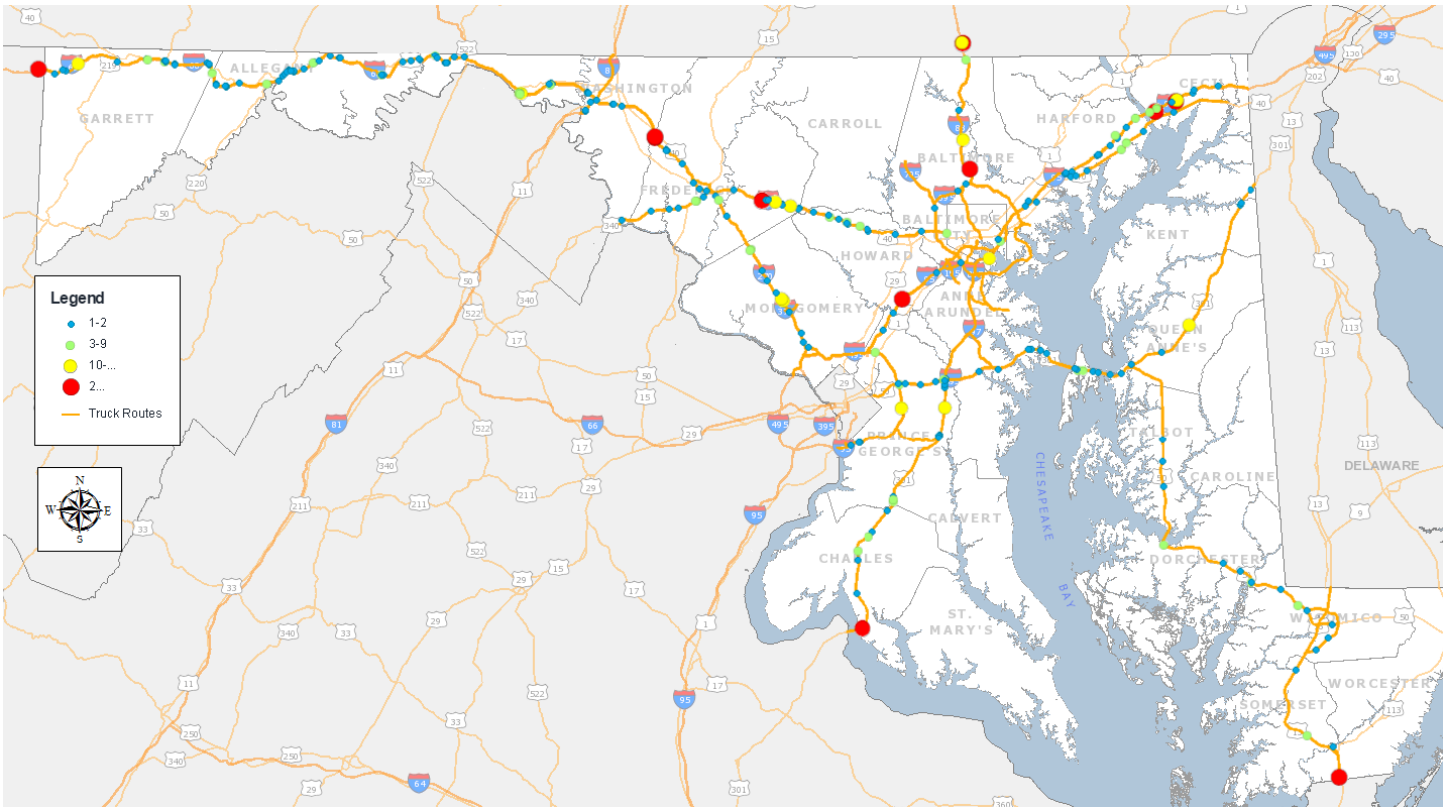
Truck Parking 2012



PERFORMANCE MEASURE SHA 3.4

Amount of Documented Illegal Truck Parking along Maryland State Roadways

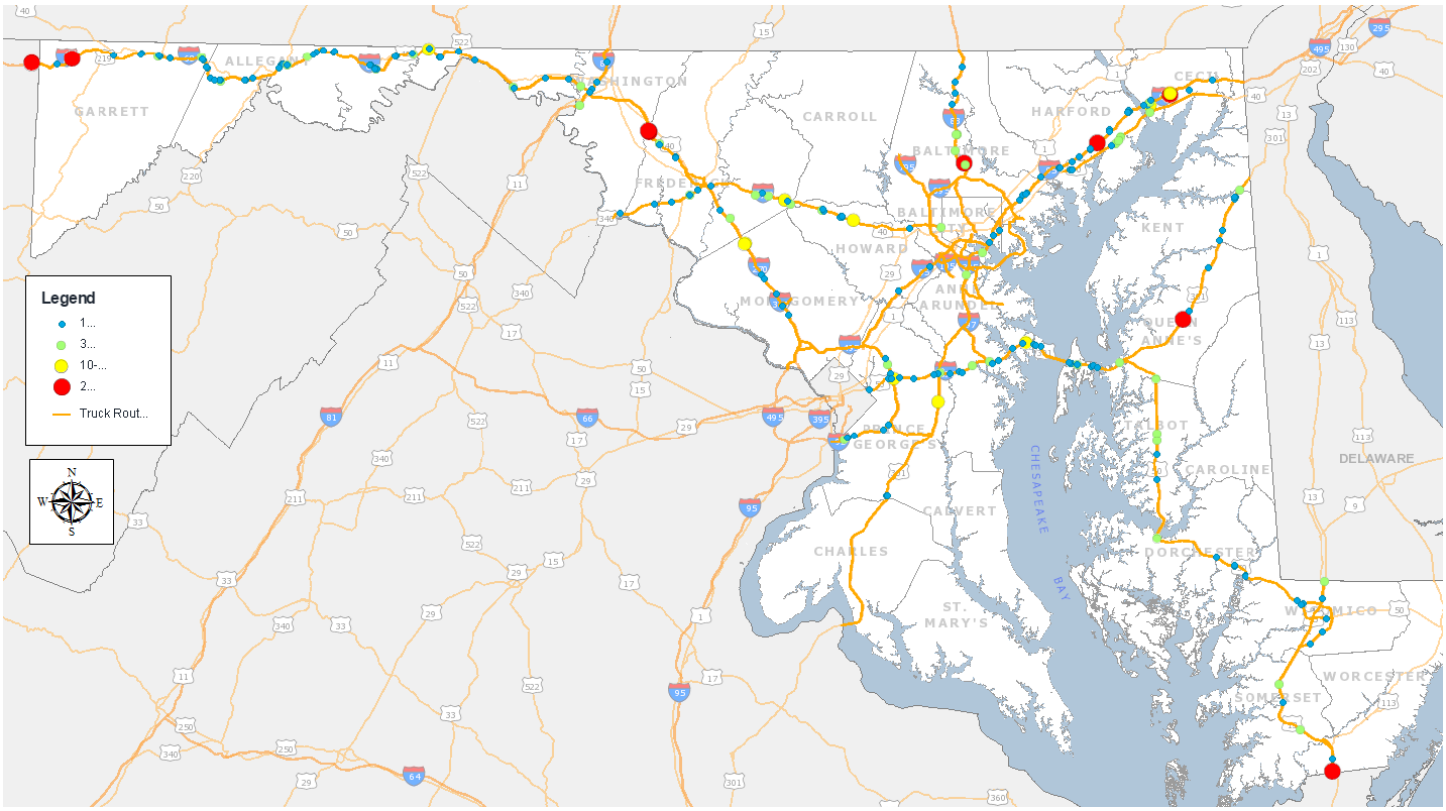
Truck Parking 2013



PERFORMANCE MEASURE SHA 3.4

Amount of Documented Illegal Truck Parking along Maryland State Roadways

Truck Parking 2014



TANGIBLE RESULT #4

Deliver Transportation Solutions and Services of Great Value

MDOT will deliver transportation solutions on time and within budget. We will use strategies to ensure that the transportation solution meets the needs of our customers and eliminates unnecessary costs.

RESULT DRIVER:
Jason Ridgway
State Highway Administration (SHA)

TBU COORDINATOR:
Greg Slater
State Highway Administration (SHA)

PERFORMANCE MEASURE DRIVER:
Eric Marabello
State Highway Administration (SHA)

PURPOSE OF MEASURE:
To track on-time performance of project advertisement date for construction contract procurement.

FREQUENCY:
Quarterly

DATA COLLECTION METHODOLOGY:
Monthly advertisement date reporting publication/ advertisement date collected manually using SHA's project database.

NATIONAL BENCHMARK:
N/A

PERFORMANCE MEASURE SHA 4.1

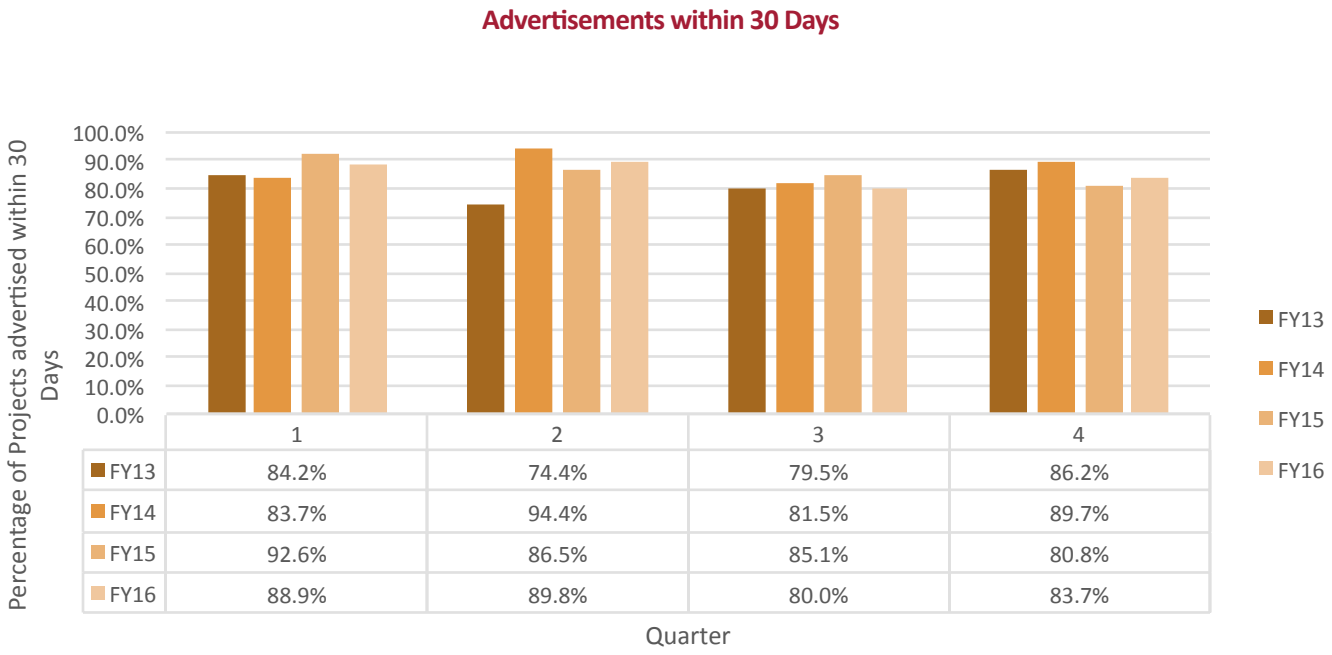
Percent of Projects (Valued at More Than $1 Million) Advertised Within 30 Days of the Original Established Financial Advertisement Date

MDOT customers expect MDOT to deliver transportation projects efficiently and quickly for a good value. To do this, MDOT strives to advertise projects within 30 days of the original established financial advertisement date. This helps contribute to on-time construction contract procurement performance. State DOTs monitor this information in different ways, depending on their specific needs and policies. National benchmarks are not available and appropriate for this measure, due to its unique nature. Data availability for comparisons will be very onerous. Moreover, there are not many states that have similar geographic and demand similarities as MDOT.

SHA's performance trend has steadily increased since the agency began tracking this measure. In FY 2013, 81 percent of all capital improvement projects valued at over $1 million were advertised within 30 days of the original established financial advertisement schedule date, while in FY 2015, 87 percent were advertised within 30 days. However, in FY 2016, 80 percent were advertised within 30 days. The SHA will continue to review established targets and monitor this performance trend to identify any efficiency improvements or corrective actions needed.

PERFORMANCE MEASURE SHA 4.1

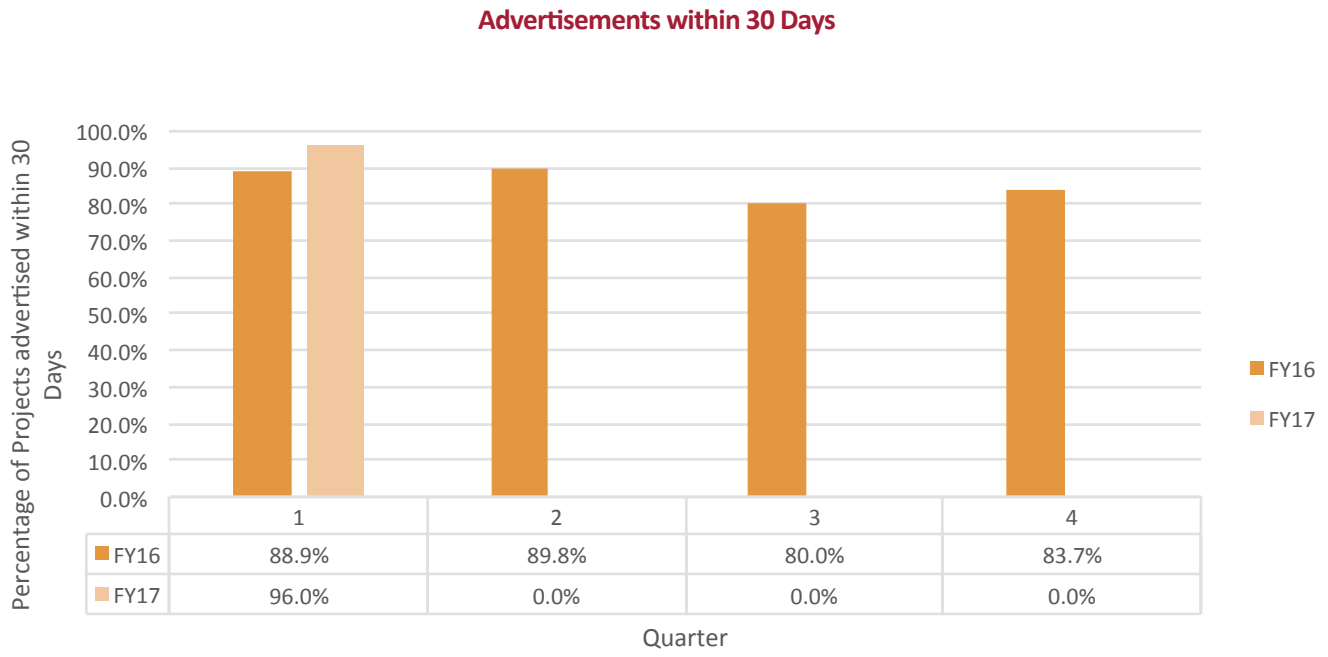
Percent of Projects (Valued at More Than $1 Million) Advertised Within 30 Days of the Original Established Financial Advertisement Date



	1	2	3	4
FY13	84.2%	74.4%	79.5%	86.2%
FY14	83.7%	94.4%	81.5%	89.7%
FY15	92.6%	86.5%	85.1%	80.8%
FY16	88.9%	89.8%	80.0%	83.7%

PERFORMANCE MEASURE SHA 4.1

Percent of Projects (Valued at More Than $1 Million) Advertised Within 30 Days of the Original Established Financial Advertisement Date



	1	2	3	4
FY16	88.9%	89.8%	80.0%	83.7%
FY17	96.0%	0.0%	0.0%	0.0%

TBU COORDINATOR:
Greg Slater
State Highway Administration (SHA)

PERFORMANCE MEASURE DRIVER:
Eric Marabello
State Highway Administration (SHA)

PURPOSE OF MEASURE:
To track on-time performance of project bid opening date for construction contract procurement.

FREQUENCY:
Quarterly

DATA COLLECTION METHODOLOGY:
Monthly advertisement data collected using SHA project and procurement database.

NATIONAL BENCHMARK:
N/A

PERFORMANCE MEASURE SHA 4.2

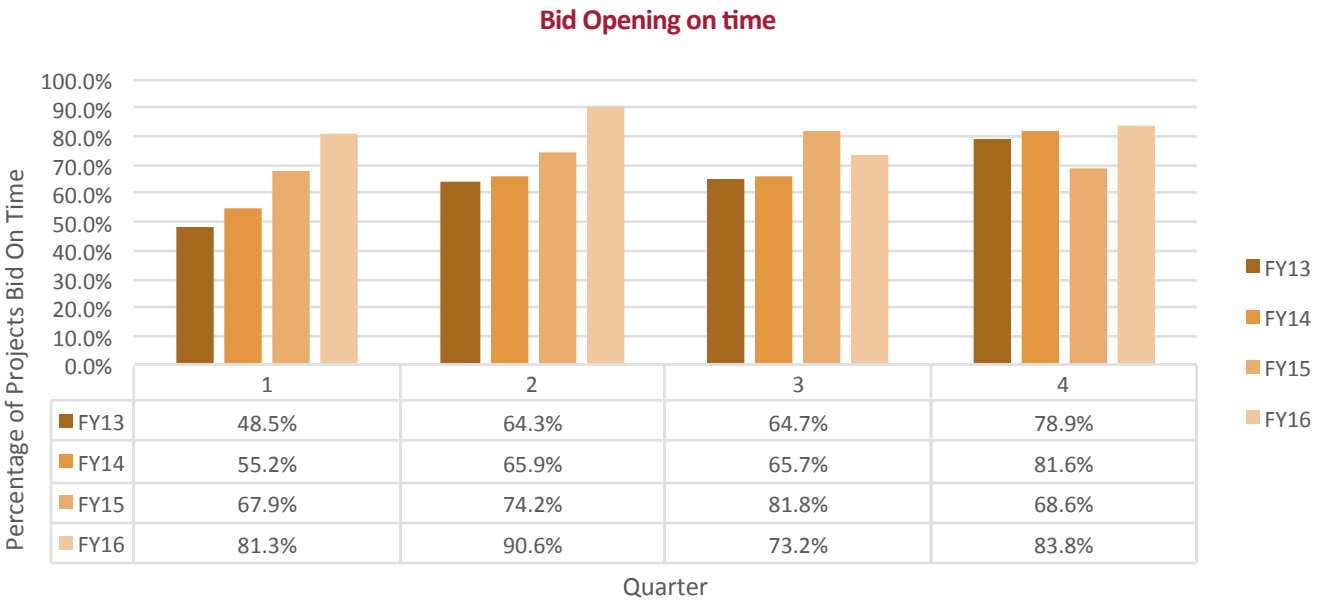
Percent of Projects (Valued at More Than $1 Million) with a Bid Opening Date on Target with the Bid Opening Date at the Time of Actual Advertisement Date

MDOT customers expect MDOT to deliver transportation projects efficiently and quickly for a good value. To do this, MDOT strives to open bids on projects on target with the bid opening date at time of actual advertisement date. This helps contribute to on-time construction procurement performance. National benchmarks are not available for bid openings, due to the unique nature of this measure. State DOTs monitor this information in different ways, depending on their specific needs and policies. Data availability for comparisons will be very onerous. In addition, there are not many states that have similar geographic and demand similarities as MDOT.

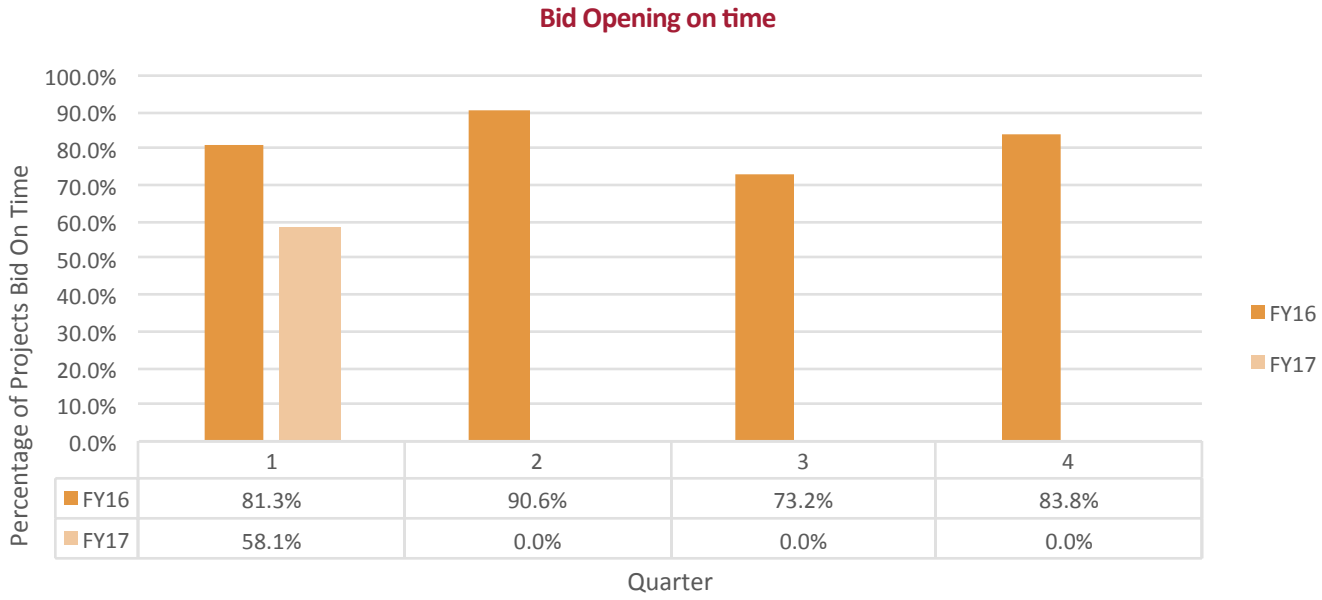
SHA's performance trend has steadily increased since the agency began tracking in FY 2013. That year, 65 percent of bid openings for projects valued at more than $1 million met the bid opening date as advertised, while in FY 2016, 80 percent of these projects met the bid opening date as advertised. The SHA will continue to review established targets and monitor performance trends.

PERFORMANCE MEASURE SHA 4.2

Percent of Projects (Valued at More Than $1 Million) with a Bid Opening Date on Target with the Bid Opening Date at the Time of Actual Advertisement Date



	1	2	3	4
FY13	48.5%	64.3%	64.7%	78.9%
FY14	55.2%	65.9%	65.7%	81.6%
FY15	67.9%	74.2%	81.8%	68.6%
FY16	81.3%	90.6%	73.2%	83.8%



	1	2	3	4
FY16	81.3%	90.6%	73.2%	83.8%
FY17	58.1%	0.0%	0.0%	0.0%

TANGIBLE RESULT #5

Provide an Efficient, Well-Connected Transportation Experience

MDOT will provide an easy, reliable transportation experience throughout the system. This includes good connections and world class transportation facilities and services.

RESULT DRIVER:

Phil Sullivan

Maryland Transit Administration (MTA)

TBU COORDINATOR:
Greg Slater
State Highway Administration (SHA)

PERFORMANCE MEASURE DRIVER:
Saed Rahwanji
State Highway Administration (SHA)

PURPOSE OF MEASURE:
To determine impacts of work zones to the traveling public.

FREQUENCY:
Annually (TBD)

DATA COLLECTION METHODOLOGY:
UNDER DEVELOPMENT - Data will be collected in the Work Zone Performance Monitoring Application (WZPMA); SHA owns the data, which is housed at University of Maryland.

NATIONAL BENCHMARK:
TBD

PERFORMANCE MEASURE SHA 5.1

Work Zone Impacts to Traveling Public and Trucks (Total User Delay Costs in Work Zones)

This is a new measure which SHA is currently analyzing. The basis for any reported user costs will be aligned with current SHA reporting in the annual Maryland State Highway Mobility report, and in the annual incident response evaluation that the University of Maryland conducts on the Office of Coordinated Highways Action Response Team (CHART).

Provide an Efficient, Well-Connected Transportation Experience

TBU COORDINATOR:
Greg Slater
State Highway Administration (SHA)

PERFORMANCE MEASURE DRIVER:
Saed Rahwanji
State Highway Administration (SHA)

PURPOSE OF MEASURE:
To maintain a specified traffic flow performance in work zones.

FREQUENCY:
Annually (TBD)

DATA COLLECTION METHODOLOGY:
UNDER DEVELOPMENT
Data will be collected in the Work Zone Performance Monitoring Application, owned by SHA, located at the University of Maryland.

NATIONAL BENCHMARK:
N/A

PERFORMANCE MEASURE SHA 5.2

Travel Time Impacts to Work Zones (Work Zone Delay Per Vehicle Mile Traveled)

This is a new measure for which SHA is currently analyzing. The basis for any reported user costs will be aligned with current SHA reporting in the annual Maryland State Highway Mobility report, and in the annual incident response evaluation that the University of Maryland conducts on the Office of Coordinated Highways Action Response Team (CHART).

TBU COORDINATOR:
Greg Slater
State Highway Administration (SHA)

PERFORMANCE MEASURE DRIVER:
Cedric Ward
State Highway Administration (SHA)

PURPOSE OF MEASURE:
To ensure that highway signs meet the minimum level of retroreflectivity established in the Manual on Uniform Traffic Control Devices (MUTCD).

FREQUENCY:
Annually (TBD)

DATA COLLECTION METHODOLOGY:
Yearly nighttime retroreflectivity evaluation.

NATIONAL BENCHMARK:
Under development. Minimum levels of reflectivity published in the MUTCD

PERFORMANCE MEASURE SHA 5.3

Percent of SHA Signs Functioning (Reflectivity)

Maintaining retroreflectivity levels is a new FHWA requirement. The minimum levels are published in the Manual on Uniform Traffic Control Devices (MUTCD). Retroreflectivity evaluation is a new program for SHA and there is no data to indicate the performance trend. The SHA is in the final stages of developing a statewide contract to evaluate signs to ensure that they meet the Federal requirements.

Provide an Efficient, Well-Connected Transportation Experience

TBU COORDINATOR:
Greg Slater
State Highway Administration (SHA)

PERFORMANCE MEASURE DRIVER:
Russ Yurek/Sandi Sauter
State Highway Administration (SHA)

PURPOSE OF MEASURE:
To determine percent of roadways along half-mile segments with acceptable line striping because it is an important component of providing a reliable and eficient roadway. Acceptable line striping is defined as the following: In any half-mile segment of a sample of SHA half-mile segments of roadway, 90 percent of the striped lines are functioning as intended. Functioning as intended is defined as intact, visible with minimal fading and/or chipping, and providing clear delineation of travel lanes at posted speed.

FREQUENCY:
Annually (in January)

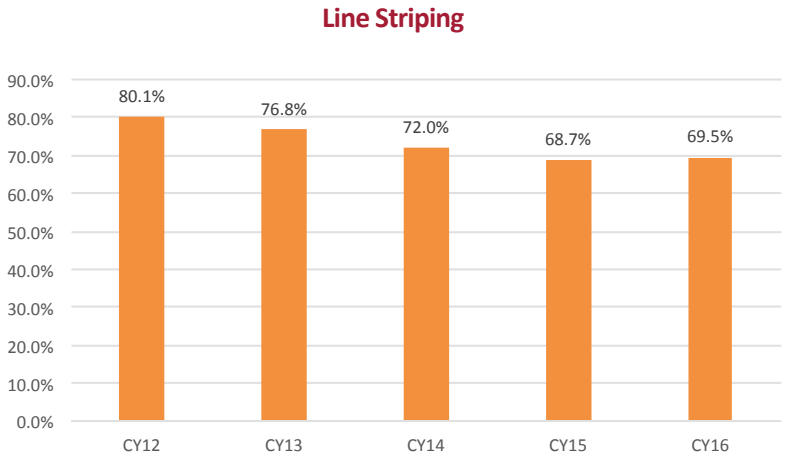
DATA COLLECTION METHODOLOGY:
The Maryland Condition Assessment Reporting System (MCARS) team compares actual maintenance condition against desired maintenance condition on a meets/does not meet basis. The MCARS team assesses the side of the road assets every year by examining each half-mile segment of a sample of SHA half-mile segments of roadway. This examination includes a visual assessment of any maintenance assets in the area.

NATIONAL BENCHMARK:
N/A

PERFORMANCE MEASURE SHA 5.4

Percent of Half-Mile Segments of Roadway with Line Striping in Acceptable Condition

Line striping is an important component of providing a reliable and efficient roadway network. Line striping, along with other traffic control components such as pavement markings and signs, provides clear delineation of the travel portion of the roadway, which is essential for the safe passage of SHA's customers. SHA's desired level of service (LOS) is 98 percent of line striping acceptable at the time of the assessment. The statewide LOS for CY 2016 was 69.5 percent. The five-year average is 73.4 percent. The performance trend has been on a decline for the past five years with only a slight increase over the past year. SHA reviews to determine if in any half-mile segment of a sample of SHA half-mile segments of roadway, that 90 percent of the striped lines are functioning as intended. Functioning as intended is defined as intact, visible with minimal fading and/or chipping, and providing clear delineation of travel lanes a posted speed. A new line-striping policy has been developed and reviewed with maintenance managers, which allows the retracing of failing thermoplastic lines with latex paint to maintain reflectivity and increase level of service. SHA is also piloting other material types and methods for line striping. In addition, SHA increased contract authority by 20 percent for all maintenance contracts, including line striping, to work towards meeting the desired LOS.



TBU COORDINATOR:
Greg Slater
State Highway Administration (SHA)

PERFORMANCE MEASURE DRIVER:
Russ Yurek/Sandi Sauter
State Highway Administration (SHA)

PURPOSE OF MEASURE:
Determine percent of roadways in half mile segments with acceptable pavement markings because it is an important component of providing a reliable and efficient roadway. Acceptable markings are those that function as intended. Functioning as intended is defined as 75% of each individual marking (90% for railroad and school crossings) is intact with minimal fading.

FREQUENCY:
Annually (in January)

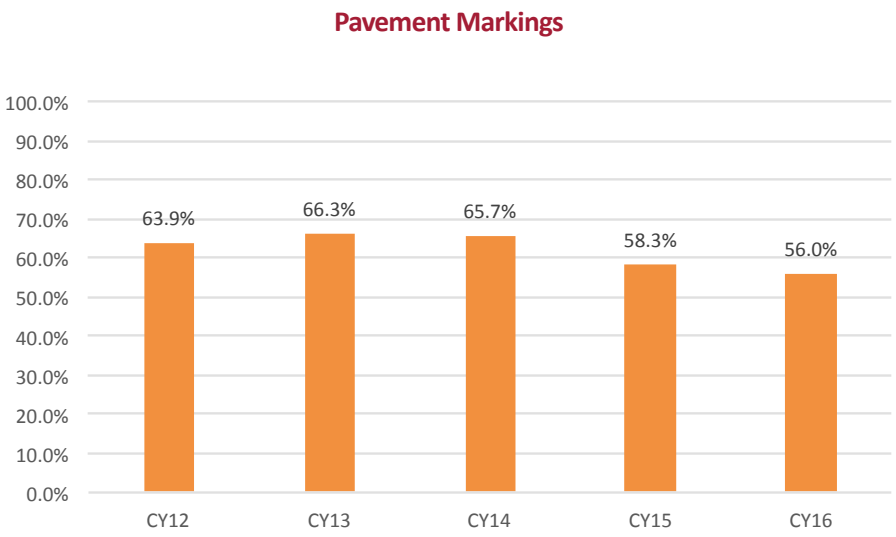
DATA COLLECTION METHODOLOGY:
The Maryland Condition Assessment Reporting System (MCARS) team compares actual maintenance condition against desired maintenance condition on a meets/does not meet basis. The MCARS team assesses the side of the road assets every year by examining each half-mile segment of a sample of SHA half-mile segments of roadway. This examination includes a visual assessment of any maintenance assets in the area.

NATIONAL BENCHMARK:
N/A

PERFORMANCE MEASURE SHA 5.5

Percent of Half-Mile Segments of Roadway with Pavement Markings in Acceptable Condition

Pavement markings are an important component of providing a reliable and efficient roadway network. Pavement markings, along with other traffic control components such as line striping and signs, provide clear delineation of the travel portion of the roadway, which is essential for the safe passage of SHA's customers. SHA's desired level of service (LOS) is 80 percent of SHA pavement markings (not line striping, which is addressed in a different measure) acceptable at the time of assessment. The statewide LOS for calendar year 2016 was 56 percent. The five-year average is 62 percent. The performance trend has been on a decline for the past three years. SHA reviews to determine if in any half-mile segment of a sample of SHA half-mile segments of roadway that pavement markings are functioning as intended. Functioning as intended is defined as 75 percent of each individual marking (90 percent for railroad and school crossings) intact with minimal fading. SHA increased contract authority for all maintenance contracts, including pavement markings, to work towards meeting the desired LOS.



TBU COORDINATOR:
Greg Slater
State Highway Administration (SHA)

PERFORMANCE MEASURE DRIVER:
Russ Yurek/Sandi Sauter
State Highway Administration (SHA)

PURPOSE OF MEASURE:
To determine the percent of SHA highway network in preferred maintenance condition because the overall condition of the network reflects how well the traveling public is provided with a quality roadway in Maryland.

FREQUENCY:
Annually (in January)

DATA COLLECTION METHODOLOGY:
The Maryland Condition Assessment Reporting System (MCARS) team compares actual maintenance condition against desired maintenance condition on a meets/does not meet basis. The MCARS team assesses the side of the road assets every year by examining each half-mile segment of a sample of SHA half-mile segments of roadway. This examination includes a visual assessment of any maintenance assets in the area.

NATIONAL BENCHMARK:
There is not a known national industry benchmark.

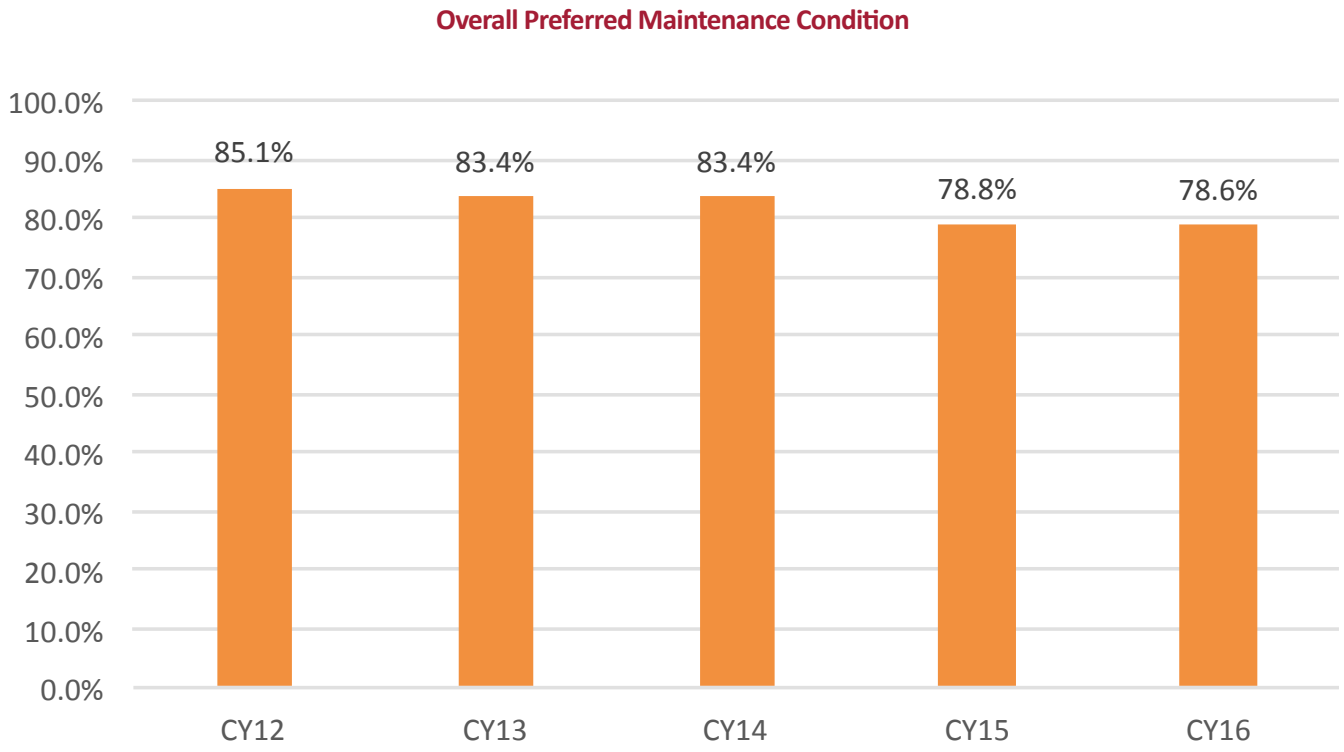
PERFORMANCE MEASURE SHA 5.6

Percent of the Maryland SHA Network in Overall Preferred Maintenance Condition

Maryland citizens require a safe, high quality and operational transportation network. Maintaining and improving the level of service is important to meet this requirement. The overall preferred maintenance condition gives the customers a sense of how well SHA has been able to maintain assets given the available resources at SHA's disposal. The SHA's desired level of service (LOS) is 84 percent of the Maryland SHA network in overall preferred maintenance condition at the time of assessment. The statewide LOS for calendar year 2016 was 78.6 percent, and the performance trend shows a slight decline in LOS over the last five years. SHA increased contract authority for all maintenance contracts by 20 percent in order to work towards meeting the desired LOS.

PERFORMANCE MEASURE SHA 5.6

Percent of the Maryland SHA Network in Overall Preferred Maintenance Condition



TANGIBLE RESULT #7

Be Fair and Reasonable to Our Partners

MDOT will provide an easy, reliable procurement experience throughout the system.

RESULT DRIVER:
Wanda Dade
State Highway Administration (SHA)

TBU COORDINATOR:
Greg Slater
State Highway Administration (SHA)

PERFORMANCE MEASURE DRIVER:
David Pinckney
State Highway Administration (SHA)

PURPOSE OF MEASURE:
To decrease the time it takes to complete A/E services contracts and develop a more efficient procurement process.

FREQUENCY:
Quarterly

DATA COLLECTION METHODOLOGY:
A/E contract tracking database under development.

NATIONAL BENCHMARK:
TBD

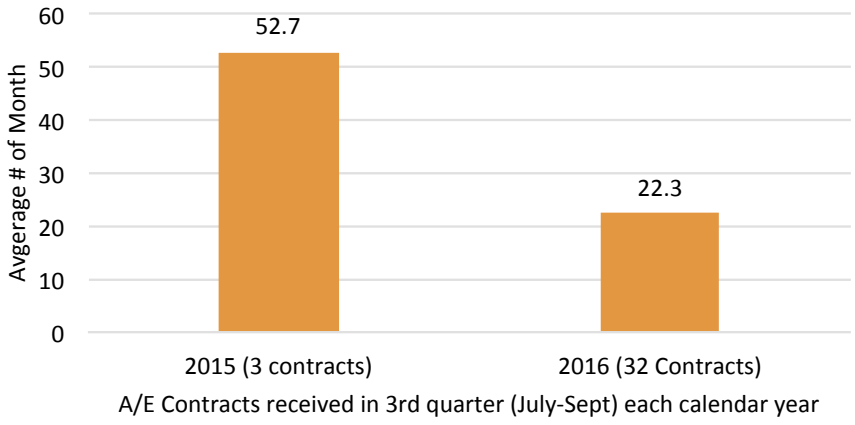
PERFORMANCE MEASURE SHA 7.1
Time to Complete Architectural and Engineering (A/E) Services Contracts

The A/E services contract procurement process is greatly influenced by procurement law. In February 2016, Governor Larry Hogan established the Commission to Modernize State Procurement. The Commission will conduct a comprehensive review of Maryland's current procurement code and regulations. The Commission's final report to the Governor is due no later than December 1, 2016.

SHA procures the most A/E services contracts of all the MDOT TBUs. SHA undertook a comprehensive review of the procurement process, which resulted in substantial delays in completing the procurement timeline during the review. As a result of this review, the average time to procure an A/E contract decreased to 34 months in FY 2016, down from 49 months the previous fiscal year, in spite of the residual effect of the procurement review delays.

SHA implemented new business processes and practices, which included quality assurance/quality controls, standardization of procurement processes, an A/E Contract Advertisement Schedule with deadlines that capture the progress of every A/E procurement. SHA Senior Management Team reviews the status of all A/Eprocurements monthly. The Contract Management Tracking Report tracks all active A &E procurements, expenditures, as well as forecasts when replacement contracts should be submitted. SHA is continuing to review its business processes to implement additional streamlining where possible.

Time To Complete A/E Service Contracts



TANGIBLE RESULT #8

Be a Good Neighbor

As the owner of statewide transportation facilities, MDOT must work with our neighbors to find solutions that work for our customers and are sensitive to our neighbors.

RESULT DRIVER:

Simon Taylor

Maryland Aviation Administration (MAA)

TBU COORDINATOR:
Greg Slater
State Highway Administration (SHA)

PERFORMANCE MEASURE DRIVER:
Russ Yurek/Sandi Sauter
State Highway Administration (SHA)

PURPOSE OF MEASURE:
To determine percent of roadways with acceptable litter levels as an indicator of providing acceptable facilities.

FREQUENCY:
Annually (in January)

DATA COLLECTION METHODOLOGY:
The Maryland Condition Assessment Reporting System (MCARS) team compares actual maintenance condition against desired maintenance condition on a meets/does not meet basis. The MCARS team assesses the side of the road assets every year by examining each half-mile segment of a sample of SHA half-mile segments of roadway. This examination includes a visual assessment of any maintenance assets in the area.

NATIONAL BENCHMARK:
N/A

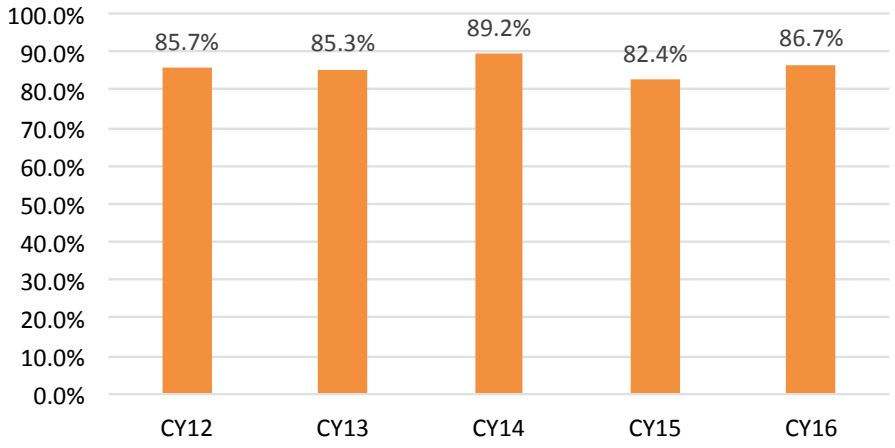
PERFORMANCE MEASURE SHA 8.1

Percent of Half-Mile Segments of Roadway with Acceptable Litter Levels

The roadside policy of SHA is influenced by the atitudes of the traveling public. Based on customer satisfaction surveys, SHA's customers have repeatedly focused on the attractiveness of SHA's roadsides. An attractive roadside conveys a sense of pride in the state, protection of the environment and natural resources, and displays a sense of a healthy and thriving community.

SHA's desired level of service (LOS) is 70 percent of SHA roadside miles have acceptable litter levels at the time of assessment. The statewide LOS for CY 2016 was 86.7 percent. The statewide LOS has consistently been above SHA's desired LOS for the past five years. SHA reviews to determine if in any half-mile segment of a sample of SHA half-mile segments of roadway there are fewer than 50 pieces of fist-sized litter observed on interstate or primary segments; or on secondary segments, fewer than 25 pieces of fist-sized litter are observed; and 95 percent of the traveled roadway is free of manmade materials that unintentionally fell from vehicles.

Percent of Half-Mile Segments of Roadway with Acceptable Litter Levels



TBU COORDINATOR:
Greg Slater
State Highway Administration (SHA)

PERFORMANCE MEASURE DRIVER:
Russ Yurek/Sandi Sauter
State Highway Administration (SHA)

PURPOSE OF MEASURE:
To determine percent of roadway in half mile segments with acceptable mowing as an indicator of a neat, acceptable roadway.

FREQUENCY:
Annually (in January)

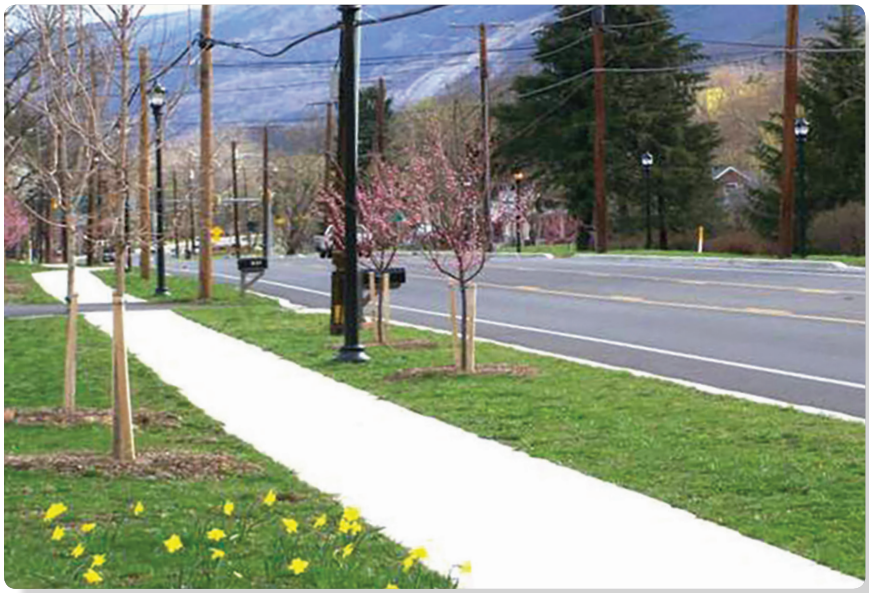
DATA COLLECTION METHODOLOGY:
The Maryland Condition Assessment Reporting System (MCARS) team compares actual maintenance condition against desired maintenance condition on a meets/does not meet basis. The MCARS team assesses the side of the road asset every year by examining each half-mile segment of a sample of SHA half-mile segments of roadway. This examination includes a visual assessment of any maintenance assets in the area.

NATIONAL BENCHMARK:
N/A

PERFORMANCE MEASURE SHA 8.2

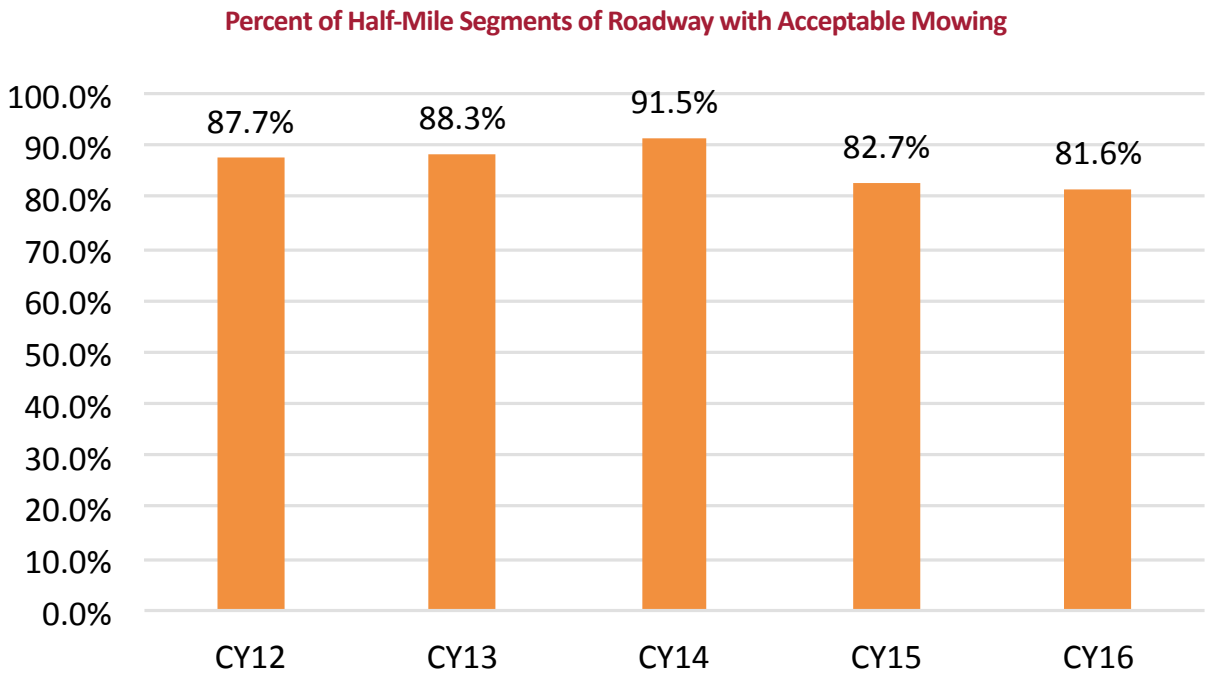
Percent of Half-Mile Segments of Roadway with Acceptable Mowing

The roadside policy of SHA is influenced by the attitudes of the traveling public. Based on customer satisfaction surveys, SHA's customers have repeatedly focused on the attractiveness of SHA's roadsides. An attractive roadside conveys a sense of pride in the state, protection of the environment and natural resources, and displays a sense of healthy and thriving community. SHA's desired level of service (LOS) is 70 percent of SHA roadside miles have acceptable mowing at the time of assessment. The statewide LOS for CY2016 was 81.6 percent. The statewide LOS has consistently been above SHA's desired LOS for the past five years. SHA reviews to determine if in any half-mile segment of a sample of SHA half-mile segments of roadway mowing is performed based on the latest mowing guidelines, which is presently 16" grass height or less, and is aesthetically pleasing and provides safe sight distances. Aesthetically pleasing is defined as uniform height with minimal noticeable weed growth.



PERFORMANCE MEASURE SHA 8.2

Percent of Half-Mile Segments of Roadway with Acceptable Mowing



TANGIBLE RESULT #9

Be a Good Steward of Our Environment

MDOT will be accountable to our customers for the wise use of limited resources and our impacts on the environment when designing, building, operating and maintaining a transportation system.

RESULT DRIVER:
Dorothy Morrison
The Secretary's Office (TSO)

TBU COORDINATOR:
Greg Slater
State Highway Administration (SHA)

PERFORMANCE MEASURE DRIVER:
Sonal Ram
State Highway Administration (SHA)

PURPOSE OF MEASURE:
To track progress towards reducing the SHA system's stormwater impacts on Maryland's waterways as part of the Bay Restoration Effort.

FREQUENCY:
Annually (in October)

DATA COLLECTION METHODOLOGY:
Actual acreage calculations.

NATIONAL BENCHMARK:
N/A

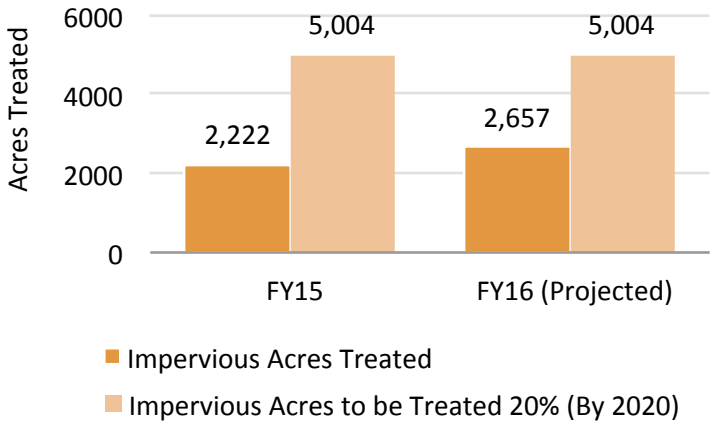
PERFORMANCE MEASURE SHA 9.1

Percent of Impervious Restoration Completed Annually

Maryland citizens require a thriving, clean and healthy environment. Addressing stormwater issues is critical to preserving our ecosystem. SHA stormwater discharge is regulated under its National Pollutant Discharge Elimination System - separate Municipal Storm Sewer System (NPDES-MS4) Permit. As part of the State's Watershed Implementation Plan in response to the Bay Total Maximum Daily Load (TMDL) imposed by the Clean Water Act, that permit now contains a requirement that 20 percent of its impervious surface be restored. Restoration activities include stream restoration, stormwater management, outfall upgrades, tree planting, and street sweeping. One-year deadlines are set at permit issuance for an accounting baseline and the computation of the 20 percent restoration requirement. Performance data will indicate acres restored through the permit expiration in October 2020.

SHA is on track to deliver compliance requirements with its National Pollutant Discharge Elimination System - Municipal Separate Storm Sewer System (NPDES-MS4) permit for stormwater discharge. SHA is addressing impervious acres every year and projects to be able to be compliant.

Percent of Impervious Restoration Completed Annually



TANGIBLE RESULT #10

Facilitate Economic Opportunity in Maryland

Maryland's transportation system is essential to the State's economy. An efficient transportation system provides a competitive advantage to businesses in a regional, national and global marketplace. Transportation directly impacts the viability of a region as a place where people want to live, work and raise families, all critical to attracting a competent workforce.

RESULT DRIVER:

Jim Dwyer

Maryland Port Administration (MPA)

TBU COORDINATOR:
Greg Slater
State Highway Administration (SHA)

PERFORMANCE MEASURE DRIVER:
Dave Czorapinski
State Highway Administration (SHA)

PURPOSE OF MEASURE:
To track the number of days to issue a hauling permit in the Maryland One hauling permit system.

FREQUENCY:
Quarterly

DATA COLLECTION METHODOLOGY:
Data is entered into the new *Maryland One* hauling permit system.

NATIONAL BENCHMARK:
Surround states/east coast ports

PERFORMANCE MEASURE SHA 10.1

Number of Qualifying Superload Permits Up to 200,000 Pounds Issued Within Two Business Days of Receiving a Correct Application in the New *Maryland One* Hauling Permit System

Hauling permits allow our customers to move loads that would otherwise exceed the legal size and weight limits, and provide general, route, and holiday restrictions as well as information specific to the move (such as crawl speeds if applicable, travel times, regulations) that maximize their safety and the safety of others on the highway. The Maryland One System processes all oversize overweight permits for the state of Maryland, including all Baltimore City permits. An average of 500 oversize/ overweight loads travel on Maryland roadways each day on hauling permits issued by the MDOT/ State Highway Administration. With nearly 150,000 hauling permits processed annually, it is important that they are reviewed quickly and accurately to ensure safe passage.

Loads up to and including 150,000 pounds are now auto-issued by the Maryland One System. Loads over 150,000 pounds still require manual engineering review, but can be processed more timely now that auto-issued loads receive a system-generated engineering analysis. Recognizing that engineering reviews become more complex as load weight increases, the ability to process loads up to 200,000 pounds in two business days is the goal for applications that are correctly submitted and need no extraordinary engineering considerations. Safety, eficiency and customer service prosper as *Maryland One keeps customers moving in and through Maryland*. The *Maryland One* system went live in late May. Maryland One is currently auto issuing permits up to and including loads meeting thresholds of 150k, 12’ wide, 14’6”High, and 90’Long. Any permit that is auto issued by this system up to the predetermined thresholds will not incur engineering fees. This system issues multi-jurisdictional permits, and encompasses bridge analysis from SHA and MDTA. We continue to review processes, procedures and meet with our stakeholders to look for ways to improve program functionality. New initiatives are on the horizon.

PERFORMANCE MEASURE SHA 10.1

Number of Qualifying Superload Permits Up to 200,000 Pounds Issued Within Two Business Days of Receiving a Correct Application in the New *Maryland One* Hauling Permit System

* Issued Superloads between 150-200k

Glossary

All Electronic Tolling (AET) – Collection of tolls at highway speeds using *E-ZPass* transponders or video tolling; no toll booths or cash collection.

Annual Attainment Report on Transportation System Performance – Pursuant to Transportation Article Section 2-103.1 of the Annotated Code of Maryland, the State is required to develop or update an annual performance report on the attainment of transportation goals and benchmarks in the Maryland Transportation Plan (MTP) and Consolidated Transportation Program (CTP). The Attainment Report must be presented annually to the Governor and General Assembly before they may consider the MTP and CTP.

Calendar Year (CY) – The period of 12 months beginning January 1 and ending December 31 of each reporting year.

Coordinated Highways Action Response Team (CHART) – CHART is an incident management system aimed at improving real-time travel conditions on Maryland's highway system. CHART is a joint effort of the State Highway Administration, Maryland Transportation Authority and the Maryland State Police, in cooperation with other federal, state and local agencies.

Consolidated Transportation Program (CTP) – A six-year program of capital projects, which is updated annually to add new projects and reflect changes in financial commitments.

Fiscal Year (FY) – A yearly accounting period covering the time frame between July 1 and June 30 of each reporting year.

MPA General Cargo – Foreign and domestic waterborne general cargo handled at the public (MPA) terminals.

Port of Baltimore Foreign Cargo – International (Foreign) cargo handled at public and private terminals within the Baltimore Port District. This includes bulk cargo (e.g., coal, sugar, petroleum, ore, etc. shipped in bulk) and all general cargo (e.g., miscellaneous goods shipped in various packaging).

MAA – Maryland Aviation Administration operates Baltimore/Washington International Thurgood Marshall Airport (BWI Marshall) and Martin State Airport, a general aviation/reliever airport northeast of Baltimore.

MDTA – Maryland Transportation Authority operates and maintains the State's eight toll facilities.

Mode - Form of transportation used to move people or cargo (e.g., truck, rail, air).

MPA – Maryland Port Administration promotes the Port of Baltimore as a leading east coast hub for cargo and cruise activity.

MTA – Maryland Transit Administration provides Local Bus, Light Rail, Metro Rail, Paratransit services and regional services through commuter rail (MARC) and Commuter Bus, as well as grant funding and technical assistance.

MVA – Motor Vehicle Administration serves as the gateway to Maryland's transportation infrastructure, providing a host of services for drivers and vehicles, including registration, licensing and highway safety initiatives.

SHA – State Highway Administration manages the State's highway system which includes 17,117 lane miles of roads and 2,564 bridges

TBU – Transportation Business Unit

TSO – The Secretary's Office

Vehicle Miles of Travel (VMT) – A measurement of the total miles traveled by all vehicles.

MARYLAND DEPARTMENT OF TRANSPORTATION

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